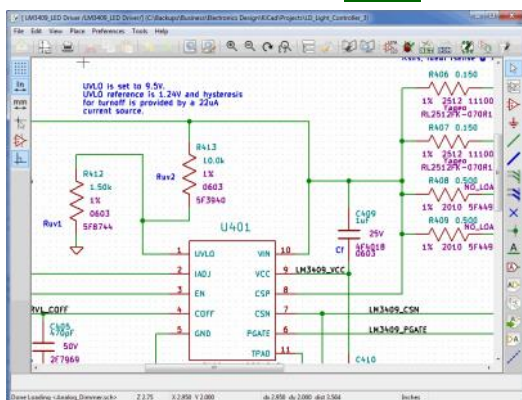


## DESIGN YOUR OWN PC BOARDS

ANAND CHOUDRI, KC2KPG—RARA VICE PRESIDENT

Getting started with Schematics and PCB Layout with open source CAD software. An introduction to [KiCad](#).



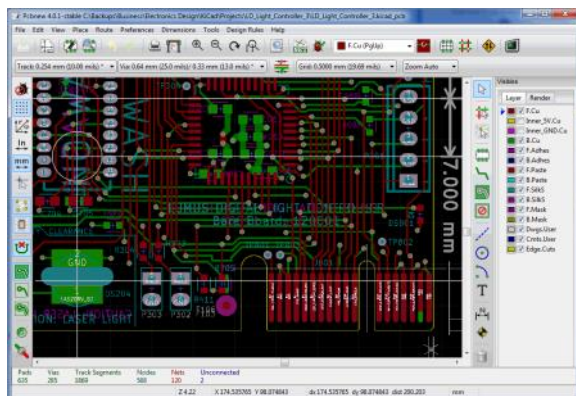
Ever wanted to make a PC board for a home project and got stopped by not knowing how to design and order a printed circuit board?

Thanks to a global team of programmers, there is now an open source program for PCB design that allows you to design a custom PC board just the way you want it. This includes the generation of schematic symbols,

schematics, component footprints and PCB layout. The software tool is called KiCad.

Jamie Oliver, KF2B, will give us an overview of KiCad to get us started.

Please join us for his presentation on Wednesday September 6, 2017 at 7:00 PM in the Boy Scouts Building, 2320 Brighton—Henrietta Town Line Road, Brighton, NY 14623.



**RARA BANQUET**  
**Friday September 22, 2017**

**SEPTEMBER 2017**  
**VOLUME 70, ISSUE 1**

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# PREZ SEZ

FOREST SHICK, WA2MZG—RARA PRESIDENT

September is here and a new meeting and activity season is beginning. That is unless you are working on Public Service and then you are in the middle of your activities for the year. Please support our Public Service activities.

**September General Business Meeting**—Once a year we briefly review the state of our organization for the past year. This is an important meeting and you should attend if possible. We elect officers and Board of Directors as part of this meeting. The Nominating Committee report follows this discussion.

**Membership Renewal**—All paying memberships expire at the end of September. You cannot vote for the new Board of Directors if your membership is not up to date. You also have to have a valid membership to participate in our November Auction. Our membership renewal page is once again working on our web site and that is the quickest way to renew. Please take a moment to visit <http://www.rochesterham.org/Membership-Data.aspx> and renew for 2018. Don't forget that you can use any earned RARA Membership Reward Points to renew your membership—an excellent reason to volunteer for public service activities, hamfest and other activities.

**RARA Banquet**—Our annual September Banquet is just around the corner. This year we have Martin Pepe as our guest speaker. Marty has many titles / accomplishments: Senior Design Guide & Mentor, Independent Study Mentor, Adjunct Professor of Astronomy and Electro-Optics Engineer. Marty's topic for the evening will be "Our Angry Sun".

We are used to our Sun being a great benefactor, it gives us light, helps grow our crops, and even in the winter gives us heat. Does our Sun have a dark 'sinister' side? We are nearing a sunspot minimum, so why worry? Come hear why a solar event could very well be a disaster to our modern economy and 'sophisticated life style'. Find out why it's not a matter of if, but it's a matter of when!

The banquet is another good use of all your accumulated RARA Membership Reward Points. OH—you don't have any—PLEASE volunteer—they are easy to earn.

**Volunteering**—Three volunteer positions need immediate volunteers.

- We need a License Class instructor for the General license class, contact our Education Coordinator Frank Schramm.
- We are in search of a new Education Coordinator, Frank would like to retire from the position. Contact Frank for more details.
- Meeting Raffle Coordinator—Jay and Sabrina are retiring from this position after many years of faithful service. Their last month is December. We need a volunteer to step in and get trained. We have a nice stock of raffle prizes so you will not start this new position empty handed! Please contact me or one of the board members to volunteer.

**RARA Membership Reward Points**—As mentioned above we have immediate opportunities for you to use your reward points: Membership Renewal, September Banquet. One of the highlights of the past year is we have initiated a Gift Certificate for Reward Points program. You can redeem your Reward Points for gift certificates from ARRL, Ham Radio Outlet and Universal Radio. It really works, I used my reward points to purchase a new 12VDC power supply for my KX3 / KXPA100. Good Deal! The gift certificates are available in \$10 increments, 20 reward points. Contact our Membership Secretary, Tim Barrett, K9VB, for more details.

**RAG**—I am excited that Dawn Lepard, KC2VJU, has volunteered to help me with RAG editing and other duties starting in September. Advertising in the RAG works! Dawn previously was our Refreshment Coordinator. Kelly Nichols, KD0FOP stepped up and volunteered to be our new Refreshment Coordinator.

**License Classes**—It's that time of year again. Time for license classes. More information is available later in this issue. BUT we really do need your participation—a General Class License Instructor.

**JOTA**—Steve Fell, K2SRF, would like to remind all of you that the Boys Scouts Jamboree on the Air (JOTA) is at Camp Babcock Hovey on October 21st from 8AM till 4PM. Anyone wishing to help with this event please contact Steve. This is a

## CALENDAR OF EVENTS

**SEPTEMBER 6<sup>TH</sup>** - RARA General Meeting

7:00 PM at BSA Headquarters, 2320 Brighton Henrietta Town Line Rd

**SEPTEMBER 7<sup>TH</sup>** - RARA Board of Directors

5:30 PM at BSA Headquarters, 2320 Brighton Henrietta Town Line Rd

wonderful way to say Thank You to the Boy Scouts for the use of their fantastic meeting rooms each month. Please say Thank You and help out.

**ASRAS**—Astronomy Section Rochester Academy of Science has joined our band of merry contributors to the News From Area Club section of the RAG. If you are wondering how they fit in, well, they have a radio telescope team. When you think of astronomy, the first thought is looking at the stars through an optical telescope. Optical and Radio astronomy both study electromagnetic waves emitted by objects in the sky. This issue of the RAG has an article, Radio Astronomy News, which we hope will become a regular feature of the RAG.

**Technology Grant**—As you have heard in monthly meetings, our Board of Directors has been working on a Technology Grant to replace our scholarship. The goal is to take the same amount of funds and have a greater impact on more students. Instead of 1 student getting a \$1000 scholarship for one year, our technology is focused on helping 1 classroom for more than one year. Therefore more students benefit from our grant—more bang for the buck! The grant has been submitted to 3 educational grant web sites. As soon as we see they have posted our grant, we will put links in the RAG for members and especially teachers to learn more about our endeavor.

**Meeting Dates**—The following are the General meeting dates for 2017 / 18:

- September 6, 2017
- October 4, 2017
- November 1, 2017—Auction
- December 6, 2017
- January 3, 2018
- February 7, 2018
- March 7, 2018
- April 4, 2018
- May 2, 2018
- June 6, 2018
- July—no meeting—join us for our picnic on July 14, 2018
- August 1, 2018

Please mark your calendars so you do not miss any meetings.



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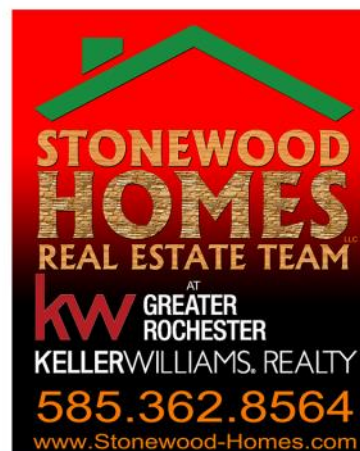
- Estate Liquidation - Downsizing - or just a change of scenery...

*Whatever your real estate needs are, call:  
Frank (WB2PYD) or Lisa (K2BGR)*

Lisa Schramm (K2BGR)  
Licensed Real Estate Salesperson  
LSchramm@KW.com  
585.756.3185

Frank Schramm (WB2PYD)  
Realtor  
Licensed Real Estate Salesperson  
Certified Financing Specialist  
FSchramm@KW.com  
585.362.8564

Keller Williams Realty Greater Rochester  
2000 Winton Rd South Building 1-201  
Rochester, NY 14618





# NOMINATING COMMITTEE REPORT

Mr. Tim Guyot, KB1POP  
Secretary, Rochester Amateur Radio Association, Inc.  
P.O. Box 93333  
Rochester, NY 14692-8333

Dear Tim and members of RaRa,  
On behalf of the members of the Nominating Committee I am pleased to place the following names in nomination as Officers and Directors of the corporation for the 2017-2018 term.

President: Forest Shick, WA2MZG  
Vice-President: Tim Guyot, KB1POP  
Secretary: Anand Choudri, KC2KPG  
Treasurer: Brian O'Connor, KA2CGB

Directors:

Tim Barrett	K9VB
Don Kiser	AC2EV
Mike Moore	N2USB
Mark Pedersen	KC2UES
Gary Skuse	KA1NJL
Betsy Tascione	KD2DYU
Scott Theis	W2LW

This completes the work of the Nominating Committee and I wish to thank Kevin Carey, WB2QMY and Jim Stefano, W2COP for their work on the committee and their help in preparing this report.

Sincerely,  
Frank Schramm, WB2PYD  
Chairman, 2017-2018 Nominating Committee  
Rochester Amateur Radio Association, Inc.

# BIOGRAPHIES OF CANDIDATES FOR OFFICERS AND BOARD OF DIRECTORS OF THE ROCHESTER AMATEUR RADIO ASSOCIATION

## **Forest Shick, WA2MZG**

### **Candidate for President**

I am currently the president of RARA. I am also the editor of the RARA RAG. For the 2017 Hamfest, I was responsible for procuring prizes that were available at our Hamfest.

I have been interested in electronics since I was 12 years old. I have been a ham and a life member of ARRL for over 40 years. I have a BSEE from Indiana Institute of Technology in Fort Wayne, Indiana. My electronics career started at Motorola Communications Division where I worked on UHF & VHF land mobile and rail transit radios. Next I worked at Harris RF Communications in the VHF / UHF land mobile radio group. Then a small company designing battery operated, microprocessor controlled instruments for monitoring: power, toxic and explosive gas, air quality and other parameters. Finally retiring after owning my own electronics design and consulting business.

It was during my first year at IIT that I became a ham. I passed the Technician test so I was able to operate the club station while improving my code speed to pass the Advanced license test. I held an Advanced class license until I recently passed my Extra class exam.

My ham radio interests lean more towards building and experimenting than rag chewing, although I would really like to build up my code skills to operate CW once more. My latest mode of interest is JT65. I have made contacts that qualify as 1000 miles per watt. For example Japan on 5 Watts.

I offer my technical background to help further RARA's goals of expanding amateur radio in the Rochester area. My skills as an Engineering Manager (I was responsible for all the engineering areas in the company) will provide the tools to assist me as President of the RARA Board of Directors.

To be sure, I am not a total electronics nerd, I play, guitar, drums, piano, clarinet and have other non electronic skills.

I would be honored to be RARA President for the next year.

## **Tim Guyot, KB1POP**

### **Candidate for Vice President**

In 2007, with some support from Dave Snyder (KC2REO) I entered the amateur radio world picking up my technician's license. A year later I upgraded to general.

In college at RIT, I met a few others who had CBs, but as soon as I learned about power limits (I've always been a legal CB operator) and antenna efficiency, I quickly became interested in amateur VHF operation instead. While at RIT, I worked with Jim Stefano (W2COP) and Dave Snyder (KC2REO) to help maintain K2GXT radio equipment and EchoIRLP repeater while at RIT.

I'm mainly a VHF/UHF operator. I have volunteered to support many events involving cycling or running. (BikeMS, AIDS Rochester Red Ribbon, Rochester Marathon, Etc.) and I look forward to more. My primary areas of technical interest are UHF-10m antenna design and field operation.

Last year I was the traffic lieutenant, working under Pete Fournia (W2SKY) for RARA Hamfest 2016. This year, in addition to joining the board as RARA's secretary, I was also on the three-person Hamfest 2017 production panel.

If elected as vice president, my three goals are to continue our record of interesting, informative monthly meeting presentations, to ensure the continued success of our key events outside of the monthly meetings, and to look for new ways to drive membership to keep our club and hobby strong.

## **Anand Choudri, KC2KPG**

### **Candidate for Secretary**

I have been a Ham for fifteen years and I have enjoyed the variety of things one can do in this hobby. I particularly like the RaRa club where I learn a lot from our experienced members. The club, through its dedicated officers, prepared me for the license exams when I first joined the club and then later when I upgraded to General. The numerous activities that RARA conducts is truly remarkable and I believe it does not get the attention it deserves.

My primary activity in Amateur Radio is in public service such as Walnut Hill Driving Competition, Tour de Cure, Pumpkin Patrol, etc. I am a member of ARES/RACES and have participated in Monroe County RACES drills. I want to get more involved in HF and CW.

I have been on the Board for the past three years, the last two as Vice President. There is still a lot for the Board to accomplish and so I would like to continue on the Board, this time as Secretary. I promise to do the best I can to keep the club an interesting organization and with your help make it even better. I hope that you will give me the opportunity to continue to serve you as a Board Member of your club.

## **Brian O'Connor, KA2CGB**

### **Candidate for Treasurer**

Brian O'Connor has been licensed as KA2CGB since 1978. His amateur radio interests include HF phone and data as well as VHF scatter modes.

Brian retired from Harris RF Communications after 30+ years where he helped customers implement radio systems with stations from QRP to 100 kW. He and his family lived in Europe for two years and in the Middle East for 10 years.

In addition to his duties as RARA's treasurer, he is a volunteer at the Antique Wireless Association (AWA) museum in East Bloomfield.

Empty-nesters, Brian and XYL Marion live in Perinton.

## **Tim Barrett, K9VB**

### **Candidate for Board of Directors**

Born and raised in the UK, I have lived in Honeoye Falls, NY since 2004. I have had a lifelong interest in radio and electronics, first becoming licensed in the UK as G7NYA in 1987 and later as M0TIM. On moving to the US one of my first actions was to get my Extra ticket and become a member of RARA (Life member since 2006). My main interests are HF and restoring or repairing old radio gear and test equipment. I am also interested in the technical / theoretical side of the hobby.

We are very fortunate to have such a great club in the Rochester area. I have served as Membership Secretary for the past three years and been on the Board of Directors for two years. I am now seeking re-election to the Board of Directors and looking forward to contributing further in any way that I can.

## **Don Kiser, AC2EV**

### **Candidate for Board of Directors**

I am a current BOD member, lifetime member of RARA, and VE Team Leader. Have you upgraded to Extra yet? Free exams are held every 3rd Saturday. I enjoy working HF when the time allows. But, mostly I find myself spending time with my three children. I hope to again serve as a member of the BOD.

## **Mike Moore, KC2NM**

### **Candidate for Board of Directors**

I have been a ham for 50 years and have found it to be a great hobby! I received my Novice license at the age of 14 with the callsign of WN8ZPY in Southern Ohio. My first ham rig was a Heath HW-16. I graduated the next year to WA8ZPY and an HW-100. I had a lot of fun as a teenager working local stations, DX, and some net work. After High School, I earned a BSEE degree from the University of Cincinnati and while there worked as a Co-op for a gentleman that I knew quite well from 2 meter FM. I upgraded to Advanced in college. Following college, I moved to Rochester with my wife Susan to work for Xerox and picked up an MSEE degree from RIT. I joined RARA sometime in that period as WA2GSG. My career took a turn to sales and then automation software development working for myself. In 1995, I studied for the Amateur Extra license at the RARA prep course and passed the Extra Test with the callsign KC2NM. My current radio interests include DSTAR and the other digital modes. I retired from Exelis in 2014 as a test engineer to pursue my hobbies which include sailing, biking, computers, and cooking. Our two children live with their families here in Rochester so there are many opportunities to do the granddaddy thing. I serve as the Public Service Event coordinator and look forward to adding the RARA director role to that.

## **Mark Pedersen, KC2UES**

### **Candidate for Board of Directors**

I have been licensed since 2008 as a Technician. In 2016, I was accepted to join the volunteer staff of K2BSA, the ham radio station for the Boy Scout National Jamboree (held in July 2017 in West Virginia). With that motivation, I passed my General exam, and am still studying for the Extra exam. While at the Jamboree, I assisted the other volunteers to make contacts for Scouts in the merit badge classes, and log contacts for the station. K2BSA experienced 2,457 visitors, with 305 radio merit badges earned. I learned a lot and made several contacts on 20 and 17 meters, including W1AW for one Scout, and learned about FT8 mode on 30 meters.

Here at home, I have worked several public service events, participated in a VHF contest, bought (and tried to build) antennas, purchased more HTs than I can use at one time, and longed to communicate even longer distances. I finally have a long wire antenna for 10 to 80 meters installed at home and am shopping for an HF radio.

I fully support RARA's public service to the community, the Rochester Hamfest, which I would like to see occur annually, RARA's educational endeavors, all from which I, and I am sure many others, have benefitted, as well as the VE program. I view my service on the board of directors as my way of paying RARA back for the benefits I've received from it and its members.

## **Gary R. Skuse, KA1NJL**

### **Candidate for Board of Directors**

I was born in Irondequoit and earned a BA in Biology from the University of Rochester before continuing my education in Syracuse, Boston, Woods Hole and Hanover, NH. I returned to Rochester in the mid 1980's to raise my family and I am currently a Professor of Biological Sciences at RIT. At the age of 10 my dad and I built an Eico Space Ranger shortwave receiver (which I still own) that ignited an interest in radio that persists to this day.

After years of trying to learn the code by reading it on paper I started listening instead and learned it in two weeks. With the help of a Heath licensing course I earned my novice ticket in 1985 and over the next year I upgraded to General and Advanced and retained that license class for more than 20 years. In 2009 I upgraded to Extra and was an active member of the RARA VE team for approximately 7 years after that. After serving on the RARA Board for several years I had the pleasure of being the Vice President and Program Chair for 3 years and spent a very short time as the interim President.

My broad interests in radio range from HF to VHF and UHF and, as a past member of AMSAT, extend into space. Due to an intense interest in many things digital, I served as chair of the Rochester Amateur Packet Society, I am the founder of the Digital Communications Association of Perinton, the trustee of the KA2AIR club station and I help maintain the KB2VZS DStar repeater. I am an avid SWL and I voraciously monitor airband communications and ADS-B transmissions. In my spare time I provide radio and data telecommunications support for Airsupport, LLC, a local company involved with air shows nationwide.

## **Betsy Tascione, KD2DYU**

### **Candidate for Board of Directors**

I have served for three years on RARA's Board - two years as Treasurer and one year as a Director. I am seeking another one year term on the Board.

I earned my Technician, General, and Extra licenses through RARA's (free to members) license classes and VE testing between 2013 and 2014, but I had very little practical knowledge of radio or electronics at that time.

By immersing myself in service to our Club I have met many friends and Elmers, some brilliant scientists, and a few crack-pots - ALL of whom have something to offer to our Club and our hobby.

I have learned a great deal about ham radio over the last four years, almost all of it is entirely thanks to RARA members who have generously shared their time, knowledge, and information with me and many others in our Club and the community.

My main interest still lies in emergency communications. My love of weather watching has been piqued, and keeping my SkyWarn training up to date is important to me.

I recommend that new hams and seasoned operators get involved in our Club's projects and events. EVERYONE has something to offer, and together we can really enhance this Club's features for the current Membership, and enthusiastically introduce our hobby to a wide range of new people, young and young-at-heart.

## Scott Theis, W2LW Candidate for Board of Directors

I have been working with electronics from a very young age (playing with lights and batteries at the age of four). As I grew up I quickly realized there was a wealth of goodies in the electronics that adults would throw out. One of my early radio projects (today referred to as a hack) was building a transmitter from a conventional AM five-tube radio. I collected while learning and building as much as possible with radio and TV. This included improving the front end of various TV receivers to further my fledgling DX hobby receiving UHF stations in Iowa and Wisconsin from my home in Minneapolis. By the way, I had no idea what atmospheric ducting was at the time.

At the end of the 60s, my father introduced me to transistor logic and 7400 series ICs. The computer became the next area of interest and, in fact, from my mostly father's design, I built a working 16-bit computer strictly from 7400 series TTL devices. This was right as the Intel 8080 was released.

While I have only recently been minted as a ham, I have been listening, building and playing since I was a child (I still have my 1974 ARRL Handbook).

In real life (where you make a living), I work as a Software Developer and Business Manager for a local software company that develops, sells and supports products worldwide to help public corporations and mutual funds create and file documents to the U.S. Securities and Exchange Commission. I have been working with the analysis and processing of text, HTML, SGML and XML for the past 30 years which has lead me into the development and support of GUI interfaces, communication protocols and internet functionality. Prior to that, I worked with hardware and software for data stream processing. I have also developed a couple of assemblers as well as a number of script languages.

I am currently an Extra Class amateur and member of RaRa. I hope to help the club with expansion and participation of members by serving as the webmaster and aiding the club on a business development level.



## Radio Fab Lab!

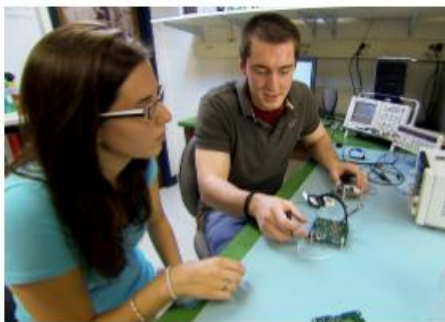
Level 1, Hands-On Workshops for **Ages 10-19**  
*on Electronics & Wireless Communications. Starts SEP 2017*

**Learn it, build it, take it home with you!**

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- Learn the basics of electronics
- Build & test circuits in Workshop #1
- Build
  - Transistor circuits
  - Amp for a smart phone
  - Morse Code oscillator
  - Transmitter
  - Receiver
  - Antenna
- Communicate using what you built
- Learn about digital wireless, drones and cameras through building devices.

**And..take the projects home with you!**

Saturdays at the AWA Museum, 9am-11am, Sept. 9-Dec. 2  
(no workshop on November 25)

\$140 includes one-year museum membership (cost is \$240 for non-members),  
attendee can bring one adult for free, 6925 Route 5, Bloomfield, NY 14469

To sign up or ask questions: Email: [Education.awam@gmail.com](mailto:Education.awam@gmail.com)  
Class size is limited to 30. Register in advance using the registration form.



# **RaRa Banquet**

*September 22, 2017*

*6:00 PM*

*Dinner at 7:00 PM*

*Burgundy Basin Inn*

*1361 Marsh Road*

*Pittsford, NY*

*Buy your tickets now!*

*Members: \$15 or 30  
Membership points*

*Non-members: \$20*

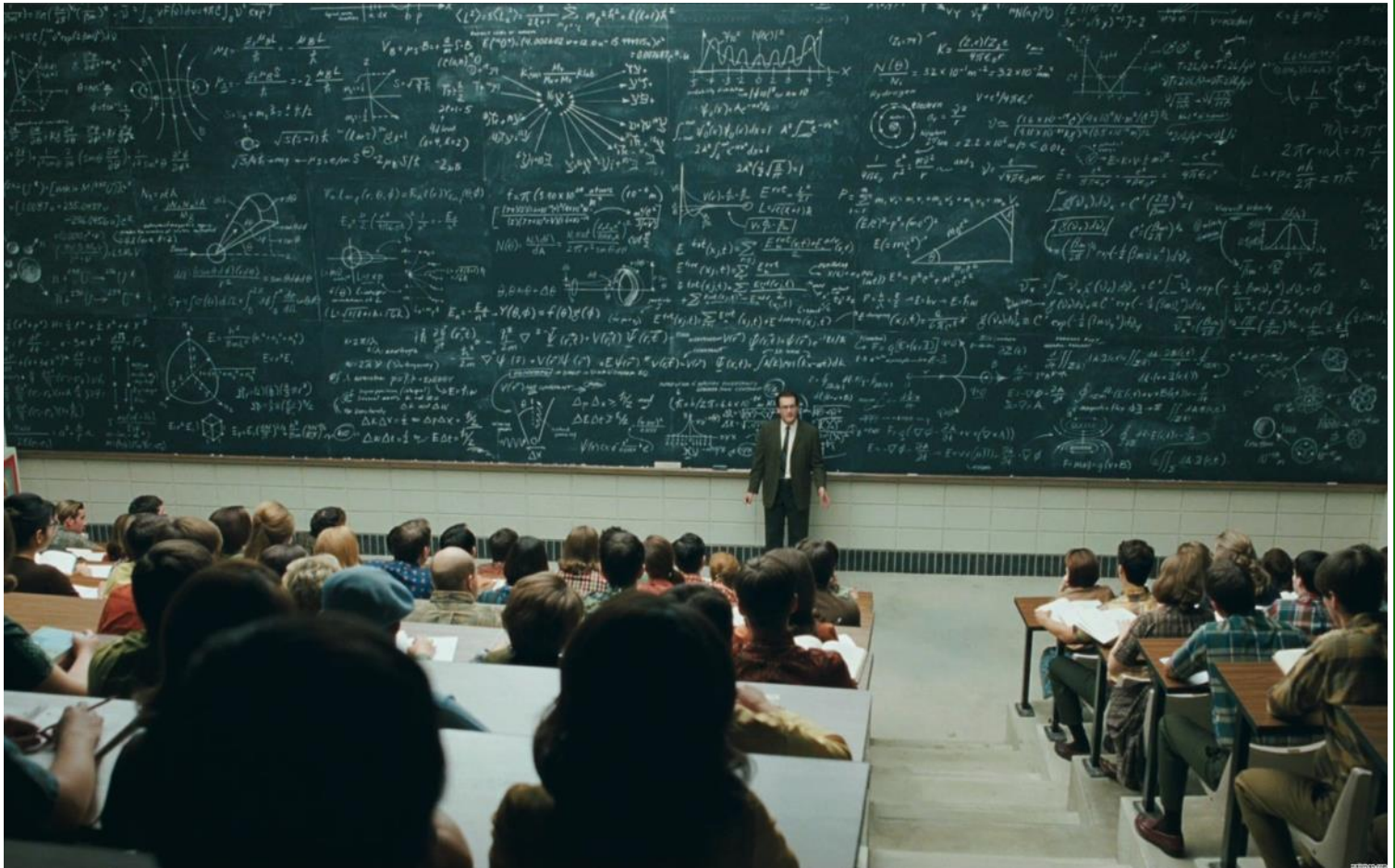
*Purchase tickets on  
our web site*

*NO tickets will be sold  
at the door.*



# FALL LICENSE CLASSES STARTING SOON!

Frank Schramm, WB2PYD, Education Coordinator



September means "Back to School." RARA — sponsored license classes will be starting up again in a few weeks, so this is a great time to take the plunge into Ham radio or upgrade your current license. Classes are a great way to brush up on current technology, share tips and make new friends.

RARA will offer classes at the RIT campus in Henrietta. Classes will run for 10 weeks, and are FREE to RARA members and students. Manuals can be obtained through the club at a discounted price of \$25.00. As an added incentive for new hams, RARA helps subsidize the cost of a small two-way radio for Technician course graduates.

So, what are you waiting for? Sign up now or get more information by e-mailing [WB2PYD@gmail.com](mailto:WB2PYD@gmail.com).

## PUBLIC SERVICE CALENDAR

[http://www.rochesterham.org/public\\_service.htm](http://www.rochesterham.org/public_service.htm)

Event	Location	Date
Bike MS: ROC the Ride	Genesee Valley Park—Rochester, NY	Saturday September 9
Fairport Lift Bridge Regatta	Erie Canal – Fairport, NY	Sunday September 17
Jamboree on the Air	BSA Camp Babcock-Hovey - Ovid, NY	Friday - Saturday October 20-21
Pumpkin Patrol	Overpasses of the New York State Thruway	Monday & Tuesday October 30-31
Science & Technology Days	Rochester Museum & Science Center	Tuesday - Saturday December 26-30

# SEPTEMBER RARA PUBLIC SERVICE EVENTS

Mike Moore, KC2NM, Public Service Coordinator

As Ham support for area events continues this year, we've only passed the halfway mark. Two area favorites take place in the month of September and you're invited to participate, new hams are welcome!

**Cycling:** BikeMS: ROC the Ride, Saturday September 9th, 2017



This event supports a very worthy cause. It starts out in Genesee Valley Park, heading south from there to Rt(s) 5 and 20. A minimum of 15 ham operators are needed for a half day cycling event consisting of three separate tour distances (30, 65, and 100 miles). We will provide communications for the event and specific tasks may include bike repair van communications, rider escort safety communications, staff communications, and re-supply communications.

We will provide safety communications for participants by summoning EMT's, as necessary, via Net Control. Go to [http://bit.ly/RARA BikeMS-ROC Volunteer Sign-up Form](http://bit.ly/RARA_BikeMS-ROC_Volunteer_Sign-up_Form) to sign up and for more information about the MS Society and the Rides visit [http://main.nationalmssociety.org/site/TR/Bike/NYRBikeEvents?pg=entry&fr\\_id=28957](http://main.nationalmssociety.org/site/TR/Bike/NYRBikeEvents?pg=entry&fr_id=28957). Our event captain for this event is Phil Visalli K2ELV.

**Erie Canal:** Fairport Lift Bridge Regatta - Sunday September 18th, 2017



The regatta is held on the beautiful Erie Canal and finishes in the very picturesque Village of Fairport. The course is approximately 5,500 meters. A minimum of ten (10) ham operators are needed this day to provide the primary Safety Net for this water event. We, Hams, are needed aboard committee boats, rescue boats, and judge's boats during the entire event. Hams will be used at a couple of land based points as well. Food and drink will be provided.

Timeline: 7:00 AM – 3:00 PM

If sufficient operators are available, we can work in shifts. The race takes a break for lunch and all the safety boats and two land point staff will return to the Fairport Crew Club Boathouse. Please sign up via the RARA website at: [http://bit.ly/RARA Fairport Regatta Sign-up Form](http://bit.ly/RARA_Fairport_Regatta_Sign-up_Form)

Our RARA Team Captain for this event is Mark Pedersen KC2UES.



# RADIO ASTRONOMY NEWS

## ICECUBE ASTRONOMY

Marty Pepe

Can you study Supernovas by detecting sub-atomic particles? Come hear a presentation by U of R undergraduate student, Pouya Tanouri, about his summer job! (7:30PM Friday, Oct 6, RIT Bldg 8 Aud)

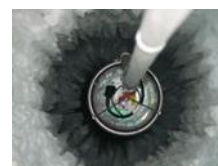


"IceCube Neutrino Observatory" is the world's largest particle detector, at one cubic kilometer, located at the Amundsen–Scott South Pole Station in Antarctica. This telescope was designed to detect neutrinos with energies greater than 100 GeV. IceCube is sending triggers from potential supernovae to the Supernova Early Warning System. IceCube is also a powerful tool to search for dark matter and could reveal the physical processes associated with the enigmatic origin of the highest energy particles in nature.

### IceCube Quick Facts

#### Science

- About 100 trillion neutrinos pass through your body each second.
- You would have to wait about 100 years for a neutrino to interact in a detector the size of a person. For the energy range that IceCube looks at, it would take 100,000 years to see a neutrino interact.
- IceCube is designed to detect particles from cataclysmic events that have energies a million times greater than nuclear reactions.
- Every day, 275 million cosmic rays are detected by IceCube.
- IceCube detects 275 atmospheric neutrinos daily and about 100,000 per year.
- About 300 scientists at 48 institutions in 12 countries conduct IceCube science.
- One terabyte of unfiltered data is collected daily and about 100 gigabytes are sent over satellite for analysis.
- The IceCube detector is one cubic kilometer of ice—that would be enough water to fill one million swimming pools.
- IceCube is frozen in optically clear ice that is very stable. The ice at the South Pole moves about 10 meters per year as single piece.



#### Details

IceCube was completed in December 2010 forming a lattice of 5160 photomultiplier tubes that monitor a volume of  $\sim 1 \text{ km}^3$  in the deep Antarctic ice for particle induced photons. Owing to subfreezing ice temperatures, the photomultiplier dark noise rates are particularly low. Hence IceCube can also detect large numbers of MeV neutrinos by observing a collective rise in all photomultiplier rates on top of the dark noise. With 2 ms timing resolution, IceCube can detect subtle features in the temporal development of the supernova neutrino burst. For a supernova at the galactic center, its sensitivity matches that of a background-free megaton-scale supernova search experiment. The sensitivity decreases to 20 standard deviations at the galactic edge (30 kpc) and 6 standard deviations at the Large Magellanic Cloud (50 kpc).

#### Sources:

- 1) A&A 535, A109 (2011) (IceCube sensitivity for low-energy neutrinos from nearby supernovae)
- 2) <http://icecube.wisc.edu/>

If you're interested in Radio Astronomy, check out some of the links (below).

Ham Radio Club RaRa – <http://rochesterhamfest.org/index.htm>

Astronomy @ ASRAS - <http://www.rochesterastronomy.org/>

Why Radio? - <http://www.rochesterastronomy.org/radio-astronomy/why-radio/>



# RARA RAGS OF THE PAST

Ed Gable, K2MP – RARA Club Historian

## 20 YEARS AGO, SEPTEMBER, 1997

With a new RaRa season starting it is appropriate to announce the officers you elected for this term. At President was George Lloyd, N2UIO, with Rick Wells, W2RW, as VP. Secretary duties were handled by Robert Gordon while Dick Goslee, K2VCZ, continued with many years of performing Treasury duties under his belt. Sitting on the Board of Directors were: Lloyd Caves WB2EFU, Neal Eckhardt WB2EKP, Peter Fournia W2SKY, Ed Holdsworth N2EH (sk), Bob Moore N2USB, Jim Shipkowski WB2WWV and Jack Trip N2SNL. Both the president and vice-president got right to work with lengthy articles as George Lloyd penned the traditional New Year welcoming message and Rick Wells, as Program Chairman announced that the kick off program was titled "The Year of Public Service and the NTS." Lynn Rosenberg, N2IZX, writing for the Code and Theory Class Team, told of the Fall schedule including Novice, Technician and General theory along with five and thirteen WPM code. Ev Tupis, W2EV, wrote to fill a half page for the Rochester VHF Group where he told of advances in VHF/UHF over the 49 years of the group's existence. The Rochester Amateur Packet Society (RAPS) recently erected a digipeater to enhance local area APRS capability, said Jack Tripp, N2SNL, in a nice informative article. With regret Patricia LaJuett KB2CHK and Ray Roberts, WA2SSU, past RaRa President, were reported as silent keys. From the Want Ads you would find the entire estate of long time Rochester Ham and DX'er, Sax Ringler, W2SAW listed for sale. Glenwood Sales, 594 Hague St., city, remains a long term advertiser.

## 40 Years Ago, September, 1977

Here again we should introduce your officers for the 1977/78 season. How many do you remember? President Ed Gable K2MP, VP Len Gessin WA2ZNC, Secretary Otto Bluntzer WB2RJB and Ron Jakubowski K2RJ as Treasurer. Sitting on the Board of Directors: Jim Collinsworth N2JC, Robert Erskine W2NVZ, Ed Holdsworth WA2EKR (sk), Howard Kingsford WA2UEB, Alan Komenski WB2ZFM, Fred Shippey WA2BQA and Harold Smith WA2KND (sk). President Gable's traditional welcoming message encouraged members to think of RaRa as much more than a monthly meeting activity and urged all to take advantage of other club services such as the licensing courses, Valentine Dinner Dance, the Rochester Hamfest and ARRL Convention, the very capable K2JD club station, free RaRa Directory listing all area hams, the TVI Committee, public service events and much more. Program Chairman Len Gessin, WA2ZNC, announced the next program to be a visit from Dick Holbert, WA2OXJ, who was the Engineer in Charge of the Canandaigua FCC Monitoring station. A very special RaRa offering for that night was that each attendee received a free ARRL Repeater Directory. RaRa meetings at this time were held at the Farm and Home Center on Highland Avenue. Floyd Koontz, WA2WVL, writing for the Rochester VHF Group told of their next meeting which is the story of W2CNS/3 and their VHF Expedition to Delaware. From the Want Ads you could buy 290 feet of Rohn Tower for two dollars a foot from Dick Jank, WB2EEU. Hamtronics, Inc., of Belmont Road in Greece, had a full two page advertisement announcing themselves as dealers for Hy-Gain and Cushcraft product lines.



the **RARA RAG**

Published by  
**ROCHESTER AMATEUR RADIO ASSOCIATION, INC.**

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September 1997

NO. 1

### September Program - The Year of Public Service and the NTS

by Rick Wells, W2RW

"Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications." Sound familiar? It should! It's FCC Section 97.1 (a), the first of the five purposes of Amateur Radio. If you're a relatively new licensee, I'll bet you recognized it right away. It was probably on your test. For the rest of you old timers (myself included) it's time to dust off those FCC Rule Books or at least take a moment and reflect on this very important element of our rules and regulations.

Now, if you have ever had the opportunity to stand in front of your town's zoning board to argue the merits of a 150 ft. tower, you probably were thanking the stars for this as well as the other four elements in our basis and purpose. Anyway, public service is supposed to be fun. It is a large part of our hobby. As an aside, I recently applied for and received a permit for a 75 ft. "Antenna Support Structure" and I'm pleased to say I did not have to stand in front of the board, but I did consider the possibility, if it had been required.

The season kick off meeting on September 5th at 8:00 PM will feature our own ARRL Western New York Section Manager, Bill Thompson, W2MTA, speaking on "The Year of Public Service and the NTS". If you've had the opportunity to hear Bill speak before or have simply talked to him at any of the WNY hamfests which he attends, you already know that this will be an informative and exciting evening. Please come and join us for the meeting. Also I would encourage you to bring any League related questions or input to present to Bill. He is our elected official to the ARRL and a most competent one from my observations. Let's use this opportunity to learn from Bill and to feedback anything on your mind which should be directed to our Atlantic Division director or the League.

Also, I would like to hear from anyone who has a special interest or talent who would consider being

### RaRa MEETING

September 5, 1997

8:00 P.M.

Henrietta Fire Hall  
3129 East Henrietta Road  
The Year of Public Service and the NTS

a program speaker. Or, if you just have an idea about some topic of general interest on what you'd like to see presented at a meeting, please let me know. If I don't hear from you, you'll be taking your chances just letting me dream up stuff on my own!

### RaRa FALL CLASSES ANNOUNCED

Greetings! I hope that everyone has had an enjoyable summer. The weather certainly has allowed all of us to enjoy the usual summer activities. Of course they're those great antenna projects as well.

At any event a little about myself for those who don't know me, have been a ham since 1989, and currently hold an extra class license, and am a graduate of RaRa. I am self employed and tune, repair, and rebuild pianos, and have been doing such since 1973.

Continued on next page.

### SILENT KEYS

Patricia S. LaJuett  
KB2CHK  
June 11, 1997

Raymond J. Roberts  
WA2SSU  
July 14, 1997  
RaRa Life Member

## The RARA RAG

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SEPTEMBER 1977

NO. 1

### The President's Corner

by Ed Gable, K2MP

It is my pleasure to welcome you all to another year of activity by the Rochester Amateur Radio Association.

For many of you this is the first issue of the RaRa Rag, our monthly publication and official organ for the association. This September issue is mailed to every licensed amateur radio operator in the Greater Rochester and surrounding county area. It is our way of reaching out to all of you and introducing ourselves to newcomers and to welcome back you OT's.

The Rochester Amateur Radio Association is a truly dynamic organization of some 681 members. RaRa holds monthly meetings from September through May of the following year. In the month of June we have our annual picnic. No formal meetings are held in July and August. The monthly meetings this year will be held on an easy to remember first Friday of each month. The only exception is our September meeting on the 9th to avoid the Labor Day Holiday. At each meeting an interesting amateur related program with guest speakers follows a brief informational and business session. Then we continue with our awards and close with lots of rag chewing over refreshments.

RaRa, however, offers a lot more than these splendid meetings and the RaRa Rag. Throughout the year we offer Amateur Radio Licensing Classes, a dinner-dance in February, the Rochester Hamfest and New York State ARRL Convention in May, a club station and mobile van, K2JD, located at 350 East Henrietta Road, a RFI Committee, and on-going public service communications working closely with the county, Red Cross and CD officials.

RaRa is affiliated with and strongly supports the ARRL. Also RaRa has two very active affiliates, the Rochester VHF Group and the Rochester Radio Repeater Association.

This year the Board of Directors has dedicated themselves to the upgrading of our club station facilities. Stress is being placed on better OSCAR capabilities and an expanded operating schedule.

Therefore, if you have any spark of interest in amateur radio, RaRa has something for you. Come on down and see. 73 for now.

Novice and General Course starts Monday, September 19th. Openings still available for General. Novice is already filled.

### September 9th Meeting

by Letta Keyelix, AKA WA2ZNC

This month starts the RaRa year. Our books, insurance, programming, and Rag, all come to life, with somewhat of a great exuberance. My task this new season will be to arrange for a program, for each of our monthly meetings. This job is a lot easier than it sounds, I think! Our club has great depth of diversified and qualified intellect and talent! If you know of a subject that you think the membership would like to hear about, please let me know. Anything from your job, a project, or a "DX" pedition, are all fair game for this group. The meeting nights that are already confirmed (I think an old, old timer would say Hi, Hi there) are September, 1977 (FCC night), October, 1977 (RaRa Auction), December, 1977 (Kodak night), and April, 1978 (AWA). The year ends in June, 1978 with a club sponsored picnic.

The September program will present Mr. Richard Holbert. He is the Engineer in Charge of the Canandaigua FCC monitoring facilities. This non-formal program will be presented in a question-and-answer format. We ask, he answers. Dick is also a RaRa member, with the call WA2OKJ.

The FCC has made a great many rule changes recently and more are proposed. I would assume a few of us would have trouble passing a novice question exam, with today's new rules, if we have not looked at a license manual for 1977. (Do you know how old a general or higher class amateur has to be to be eligible to administer a novice exam?)

I hope to see a good turnout for our first meeting. There are over 600 paid up members in our club now. As usual, we will be at the Farm and Home Center, 249 Highland Avenue, on Friday, September 9, at 8:00 p.m. Talk in via 2 meter repeaters, any of them.

### LETTERS

Dear Friends:

Thank you so much for your gift of two books in memory of Robert S. Shorey. Amateur radio and radio history are popular subjects, and the books will be much used by our patrons.

Sincerely yours,  
Judith Prevratil, Head  
Science and Technology Division  
Rochester Public Library

## VE TEAM

The next **ALWAYS FREE** testing session:

Saturday September 16th.

Rochester Institute of Technology

Kate Gleason College of Engineering

Gleason School of Engineering

Room 3139, Bldg. 9

Use "J" parking lot

Registration at 9:45AM

Testing at 10:00AM

You do not have to preregister.

To avoid giving your SSN go to:

<http://wireless.fcc.gov/uls/index.htm?job=home>

Register and bring the resultant FRN.

For more info:

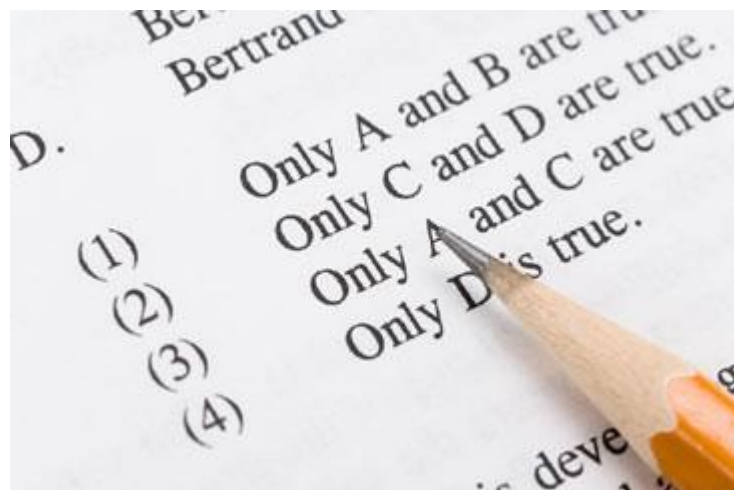
<https://www.laurelvec.com/?team=RARA>

Don Kiser - AC2EV

RARA Board member

VE Team Leader

585-613-1035



## PUMPKIN PATROL 2017

Brad Allen, KB2CHY

Yep, just another 2.5 short months and we will be out on the bridges over the NYS thruway. I will ask all those who have participated in the past to please keep an eye on their email and respond to me right away. The proper way to respond is to place PUMPKIN PATROL 2017 for a new email in your subject line or if you get an email from me simply REPLY to it. Halloween this year falls on a Monday and Tuesday evening. I prefer to have the same people take both nights if possible and the time needed may be from 7pm to midnight. This is a volunteer intensive event and very important albeit very boring at times. This is why we have the GOODIE PATROL, to stop out and visit with you and to be sure you are warm and have plenty to eat. Goodie Patrol is funded by quiet cash for both evenings. We get everything fresh as possible. We do not reuse drink from previous evening. It is all fresh and hot. Yes it costs a bit more, but it is worth it. New Hams, this is a great event for you to start out in. All you need is a radio that will get into the 145.11 repeater. It also sets you up on how to survive on a cold evening. As you sign up, I will provide all the info needed for a fun safe evening. I will be glad to provide a double up if you are not sure about the event. Really, it can be a fun evening. There is a web page for you to sign up on at the RARA website. This is fine, but I prefer a direct email with the instructions as above. I will respond to you. If I do not, the email got lost somewhere. Send it again or call my phone, see me at the meetings, etc. I am also occasionally on the 145.11 repeater. It is OK to sign up in multiple places. I sort it all out later. You can sign up on the RARA webpage AND send me an email. Email is [ballen@frontiernet.net](mailto:ballen@frontiernet.net) with no quotes "PUMPKIN PATROL 2017" in the subject line. This places your email in a separate folder. My phone numbers are 585-247-3724 or 585-247-0251 for my home. LEAVE a MESSAGE. I will get it in my email. Call my cell, 585-216-5066, that I will most likely answer, but if need be, please leave a message there as well. I wish to have the patrol all staffed and ready to go by the first part of October. If you wish to be a part of this event, be sure you have blocked out the time. I need to be done early to accommodate late changes. Thanks in advance always for your participation and help. In advance, I thank Mike Rink for the use of the repeater. PS, I will be looking for someone to take over this event from me in the future as I have my reasons for doing so.

# RARA CALENDAR

Tim Barrett, K9VB

September 2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 G3ZQS Straight Key CWOps Open Region 1 Field Day RSGB Field Day SSB TN, CO QSO Parties PODXS 80M Sprint Russian RTTY Contest Asian DX Contest SSB Wake Up QRP Sprint
3 Region 1 Field Day RSGB Field Day SSB TN, CO QSO Parties PODXS 80M Sprint Russian RTTY Contest Asian DX Contest SSB	4	5 Phone Fray	6 RaRa Monthly Mtg 7:00pm, BSA HQ, B'ton Henrietta TLR ROC City Net 8:00pm 3.826 MHz UKEICC 80M Contest	7 RaRa BoD Meeting 5:30pm, BSA HQ, B'ton Henrietta TLR NCCC Sprint	8	9 Lancaster Hamfest Kulikovo Polye Contest FOC QSO Party WAE DX Contest ARRL EME Contest SARL Field Day SKSS Sprintathon Ohio State Parks Russian Cup Digi Ctest ARRL VHF Contest
10 WAE DX Contest ARRL EME Contest SARL Field Day SKSS Sprintathon Ohio State Parks Russian Cup Digi Ctest ARRL VHF Contest NA Sprint CW Swiss HTC QRP Sprint Classic Exchange CW	11 Classic Exchange CW	12 Phone Fray Classic Exchange CW	13 ROC City Net 8:00pm 3.826 MHz SIARC 7.30pm Classic Exchange CW	14 NCCC Sprint	15	16 Scandinavian CW Ctst ARRL 10 GHz and Up All Africa DX Contest SRT HF Contest SSB IO NH NJ QSO Parties Feld Hell Sprint
17 Scandinavian CW Ctst ARRL 10 GHz and Up All Africa DX Contest SRT HF Contest SSB IO NH NJ QSO Parties NA Sprint RTTY Run for Bacon QRP	18	19 RDXA 7.30pm Phone Fray	20 ROC City Net 8:00pm 3.826 MHz RSGB 80M CW	21 NCCC Sprint	22	23 CQ WW Contest RTTY ME, TX QSO Parties
24 CQ WW Contest RTTY ME, TX QSO Parties	25	26 Phone Fray SKCC Sprint 220 MHz Sprint	27 ROC City Net 8:00pm 3.826 MHz UKEICC 80M Contest	28 NCCC Sprint	29	30 Elmira Hamfest Feld Hell Sprint UK/EI DC Contest SSB Russian WW Contest

Print this calendar and leave it by your radio.

## SAVE THE DATES

**Winterfest** - Saturday February 10, 2018 - Stewart Lodge, Mendon Ponds Park

**Picnic** - Saturday July 14, 2018 - Stewart Lodge, Mendon Ponds Park

**Banquet** - Friday September 22, 2017- Burgundy Basin Inn



# NEWS FROM AREA CLUBS

## MONROE COUNTY ARES / RACES NEWS

The Monroe County Amateur Radio Emergency Service, Inc. holds its meetings on the fourth Thursday of each month. Anyone interested, members and non-members, are welcome to attend.

The next ARES Meeting will be held on: **Thursday, September 28, 2017, at 6:00 PM.** Meetings are held at the **Greater Rochester Chapter of the American Red Cross HQ, 50 Prince Street, Rochester, NY 14607.** (Located behind the Rochester Auditorium Theatre, 885 Main St. E.)



### ARES NET:

Monroe County ARES/RACES meets on the air every Thursday of the month at 7:00 pm, on the 146.61 MHz (-) 110.9 Hz PL repeater. The only exception to that are nights when we hold our regular meeting, generally on the 4th Thursday of the month.

WEB: [www.monroecountyemcomm.org](http://www.monroecountyemcomm.org)

### Severe Weather Alerts:

Winter brings severe weather in the form of heavy snow and strong winds. If you experience severe weather, especially when accompanied by damage to property in your area, listen to your local ARES/RACES repeaters for information. While official ARES/RACES activation could be a possibility, it is more important that we open a spontaneous net simply to share information about weather conditions in your immediate area. Don't wait for someone else to do it. Pick up the microphone and start a net. Have each check-in station give you a situational awareness report and emergency power report. If you don't have a copy of the directed net protocol, you can find one at the WEB address listed above. (Activities/ARES Net/ Net Script/ Downloads)

### NBEMS:

Want to learn about Narrow Band Emergency Messaging System (NBEMS)? It's the latest and easiest way to "Go Digital!" Bring your laptop computer and 2-M handheld transceiver. We will conduct an NBEMS clinic after every meeting through June 2018.

## ROCHESTER DX ASSOCIATION, RDXA

The next meeting will be Tuesday 19 September, 7:30PM

RDXA meets the 3rd Tuesday of every month (September through May) except for December, which is the Annual Holiday Banquet. Meetings are open to everyone and all are encouraged to attend.



Meetings are held at the Monroe County EOC 1190 Scottsville Rd. (second floor), Rochester, NY 14624 at 7:30PM.

Monthly programs are announced in the official RDXA newsletter or on the website at [www.RDXA.com](http://www.RDXA.com)

## ROCHESTER RADIO REPEATER ASSOCIATION, RRRA

The Rochester Radio Repeater Association, RRRA invites you to attend its September 15th 2017 meeting. Meetings are held on the 3rd Friday of the month in the Pittsford Town Hall Basement starting at 7:30 pm. September's meeting theme will be bring in your project to show off. This includes some of the many bargains you may have purchased at our hamfest on Aug 19th. The RRRA officers are Bob Shewell, N2HJD President, Bob Odell, N2BZX Vice President, Ed Wilkonski, KC2WM Secretary, and Bob Smith, NS2B-Treasurer / Membership Chairman. RRRA also accepts donations to the club. If you are not currently a member and want to support RRRA, you can join at our monthly meeting or on our web site [www.k2rra.org](http://www.k2rra.org)

## ROCHESTER VHF GROUP

For information on the Rochester VHF Group, visit our website [www.rvhfg.org](http://www.rvhfg.org) for details.

The Rochester VHF Group sponsors an informal On-Air Net every Monday at 2100 local time on 144.260 MHz USB and a 6 Meter Net every Thursday at 2100 local on 50.200 MHz USB.

More club information can be found by visiting [www.rvhfg.org](http://www.rvhfg.org) or just calling in any Monday or Thursday night. All are welcome to check in to these nets.



## XRX AMATEUR RADIO CLUB

No meetings until September. Stay up-to-date by visiting <http://xarc.us>

## SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) meets every second Wednesday of the month at 7:30PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. We have License Exam Testing every other month which begins at 6:30PM. The next meeting will be September 13 which will be our election of Officers and Board of Directors. There will be License Exam testing this month. 73's Steve Benton VP SIARC WB2VMR

## AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER

ARAST meets the third Thursday of every month at the Town & Country Fire house in Horseheads. C-CARES meets the first Tuesday of the month except February. C-CARES covers the entire area in Chemung, Schuyler and Steuben Counties and everyone is welcome.

Don't forget to mark your calendar for this years hamfest September 30, 2017 located at the Chemung County Fairgrounds in Horseheads, NY. Tickets are available from any board member and online at our website. One small change from previous years: FCC Exams will be held one hour later. Instead of 9:00 they will start at 10:00. This was done to accommodate the VE team (Their request). Walk-ins are always welcome.

Communicators are still needed for this years Wineglass Marathon October 1, 2017. If you can help out in any manner, please contact the emergency coordinator at: [emergencycoordinator@stny.rr.com](mailto:emergencycoordinator@stny.rr.com). If you wish to help out the need for notification is now. We need to let law enforcement know who is volunteering.

Our website is almost complete undergoing construction. I understand that until the re-write is complete, it will still be usable. Look for the transition to take place after the Wineglass Marathon. So go ahead and check out our website at [www.arast.org](http://www.arast.org).

## COMMUNITY AMATEUR RADIO CLUB, CARC

If you are interested in being a part of this forward thinking and active club, visit us at a meeting or join us on one of our weekly nets. We meet at the Hoag Library (134 S. Main St. Albion, NY) on the first Saturday of each month at 7pm. Each meeting has a brief training/refreshers period with upcoming topics including: net protocol, repeater set-up/maintenance, and digital signaling. The club holds a net every Sunday evening at 8pm (winter) and 9pm (summer) - 0100 UTC Monday - on 147.585 simplex, and we host the Thursday Night Social Net, Thursday at 8:30pm on 147.285+. We'd love to hear you check-in! Take a look at the club website for more info: [www.k2srv.org](http://www.k2srv.org)

## DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP members continue to experiment with leading edge digital communications modes. We were formed in 1994 to foster the development of local and regional packet radio networks using AX25 and TCP/IP. Today we have members using the club sponsored DSTAR repeater (KB2VZS on 444.8MHz), several personal and public [DSTAR hotspots](#) (using the dvprtr board), Yaesu fusion systems on non-club repeaters and DMR. The last mode is being enjoyed locally through a [DV-Mega-Raspberry PI](#) combination. DCAP meets for breakfast at 7am nearly every Saturday morning at [Rikki's Family Restaurant](#) in Fairport and everyone is welcome to join us. Talk in is on the KB2VZS analog repeater on 146.715MHz with a PL of 110.9 Hz.

## WESTSIDE AMATEUR RADIO CLUB

The mission of the Westside Amateur Radio Club is to provide emergency communications services to the community, to assist other civic organizations, to promote the technical craft of amateur radio through class training and testing, to mentor new members, and enhance fellowship among radio amateurs.

The Westside Amateur Radio Club meets on the second Wednesday of the month at the Chili Public Library. The Library is located at 3333 Chili Ave, Rochester, NY 14624.

The talk in repeater for all meetings is the K2RWC Repeater 146.700MHz - 110.9

Website: <http://WestsideAmateurRadio.club>

## INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Interlock Rochester is open most every Tuesday night at 7pm. We're in the Hungerford Building (1115 East Main Street, Rochester NY), just north of Village Gate. Come to Door #7 (to the left of Comics Etc) and buzz Suite 200. Want to know more? Visit our website at <http://www.interlockroc.org/>, contact us at [info@interlockroc.org](mailto:info@interlockroc.org), or find us in #interlock on Freenode IRC.

## GENESEE VALLEY AMATEUR RADIO ASSOCIATION

Email [n3dsp@lafireline.net](mailto:n3dsp@lafireline.net) for details.

## ROCHESTER MAKERSPACE

The Rochester Makerspace is located at the rear of 850 St. Paul Street in almost 4,000 square feet of workspace. We are a volunteer-run 501c(3) nonprofit organization and our mission is to encourage learning, creativity and collaboration. We do that by providing low-cost and free access to sophisticated tools, offering a wide variety of classes, and by providing opportunities for "makers," artists and crafts persons of all kinds to meet and learn from each other.

Drop in to explore, learn and make at our weekly open house:

Every Thursday Night, 6 to 10 PM – Weekly Community Night & Open House

Every Saturday, 11 AM to 3 PM – Weekly Community & Open House

Park in the lot at Scrantom St. and Conkey Ave. and follow the signs.

Every Thursday Night, 7 to 9:30 PM – Microcontrollers & Robotics Meetup

A ham bench is set up with a 2 meter FM radio and a laptop with websdr. Waiting for nicer weather to install outside antennas for the Heathkit HW101 transceiver and Kenwood all mode 2 meter transceiver. Donations of ham equipment accepted.

For more information visit [Rochestermakerspace.org](http://Rochestermakerspace.org)

## ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

September Monthly Meeting—Farash Center, Ionia

Friday, September 8 7:00 PM–10:00 PM

Main talk: Dr. Jeyhan Kartaltepe on Galaxy mergers

Short Talk: Ted Lechman "Knitting to the Moon"

ASRAS Board Meeting—Farash Center, Ionia

Monday, September 11 7:00 PM – 9:00 PM

Public Star Party—Northampton Park

Friday, September 15 8:30 PM–10:00PM

Ionia Fall Festival –20th annual

Saturday, Sept 16

Ionia United Methodist Church grounds 9:00 AM–10:00 PM

ASRAS Open House & Star Party

Saturday, Sept 16 12:00 PM–4:00 PM

Star Party to follow (weather permitting) Farash Center, Ionia

Strasenburgh Planetarium Telescope Operation

Clear Saturday nights – see website for current times

For more information visit <http://www.rochesterastronomy.org/>

## FOR SALE: FT-101ZD

FOR SALE: FT-101ZD Tranceiver in excellent condition cosmetically and operationally. Fully working and will demonstrate in action in Webster. KF2B helping to sell for VE3JVS. \$375 for Eagle Mic and Radio. email: KF2B@FRONTIERNET.NET



## FOR SALE: 1967 DAVCO DR-30



Scarce 1967 Solid State Receiver  
Includes: receiver, power supply, all documentation and original box  
For more details visit [www.Bliley.net/davco](http://www.Bliley.net/davco)

## FOR SALE: KENWOOD TS440SAT

KENWOOD TS440SAT AND MATCHING POWER SUPPLY, WITH MICROPHONE, IC-10 COMPUTER CONTROL CHIPSET AND SSB FILTER INSTALLED. \$525.00  
RIGEXPERT WTI-1 WIRELESS TRANSCEIVER INTERFACE, WITH CABLES FOR KENWOOD TS440SAT, POWER SUPPLY. \$150.00  
CONTACT JAY K2JSG, 766 8872 OR [JGOLDEN577@ROCHESTER.RR.COM](mailto:JGOLDEN577@ROCHESTER.RR.COM)

# HAMFESTS

Lancaster Hamfest  
Saturday September 9, 2017  
<http://w2so.org/lancaster-hamfest/>

Elmira Hamfest  
Saturday September 30, 2017  
[http://www.arast.org/index.php?option=com\\_content&view=article&id=4&Itemid=6](http://www.arast.org/index.php?option=com_content&view=article&id=4&Itemid=6)





# THE AMATEUR'S CODE

Originally written by Paul M. Segal, W9EEA (1928)

## THE RADIO AMATEUR IS:

<b>CONSIDERATE</b>	Never knowingly operating in such a way as to lessen the pleasure of others.
<b>LOYAL</b>	Offering loyalty, encouragement and support to other amateurs, local club, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.
<b>PROGRESSIVE</b>	With knowledge abreast of science, a well built and efficient station and operation beyond reproach.
<b>FRIENDLY</b>	With slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
<b>BALANCED</b>	Radio is an avocation, never interfering with duties owed to family, job, school or community.
<b>PATRIOTIC</b>	With station and skill always ready for service to country and community.

## VISIT THE RARA WEBSITE!

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The above prices are **per year** - not per month as is typical in other publications.

Your advertisement will be seen by amateurs in Rochester, Monroe County, New York State, the United States and even the rest of the world. RAG circulation is approx. 8,000.

# RARA OFFICERS

## OFFICERS

<b>President:</b> Forest Shick, WA2MZG	(585) 721-1653	<a href="mailto:wa2mzg@arrl.net">wa2mzg@arrl.net</a>
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<b>Secretary:</b> Tim Guyot, KB1POP	(585) 406-3163	<a href="mailto:timguyot@gmail.com">timguyot@gmail.com</a>

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## DEPARTMENT HEADS

<b>Raffle Administrators</b>	Jay Hamill, KC2TCM Sabrina Hamill, WD2STK	
<b>Club Historian</b>	Ed Gable, K2MP	
<b>Club Station Trustee</b>	Jim DiTucci, N2IXD	<a href="mailto:n2ixd@arrl.net">n2ixd@arrl.net</a>
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## OCTOBER RAG DEADLINE

### SEPTEMBER 15, 2017



**RARA meets at 7PM on the  
first **Wednesday** of each  
month. Join us at:**

Seneca Waterways Council, BSA Headquarters  
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**Get Directions**

### **Rochester Area Repeater Listing**

### **THE RARA RAG**

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Website – <http://www.rochesterham.org>

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